STIC-Biotech/ChemLib

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F	rom:
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Ramirez, Delia

Wednesday, June 11, 2003 12:43 PM STIC-Biotech/ChemLib

Sent: To: Subject:

case 09/911,860

Hi,

I would like to request the following search (commercial and interference):

1. a standard search of seq id 3 in the nucleic acid databases.

Thank you,

Delia M. Ramirez, Ph.D.
Patent Examiner
Recombinant Enzymes-Art Unit 1652
USPTO
1911 S. Clark Street, Crystal Mall 1, 10D06, Mail room 10D01
Arlington, VA 22202
(703) 306-0288
delia.ramirez@uspto.gov

REE

Edward Hart Technicai Info. Specialist STIC/Biotech CMI 6B02 Tel: 305-9203

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Searcher:
Phone:
Location:
Date Picked Up: 10 13/03
Date Completed: (1)/19/00
Searcher Prep/Review:
Clerical:
Online time:

TYPE OF SEARCH:	i	
NA Sequences:		
AA Sequences:		
Structures:		
Bibliographic:		
Litigation:	<u> </u>	
Full text:		
Patent Family:		
Other:		

VENDOR/COST (where applic.)
STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Human digestive sy Human liver associ Human liver antige Drosophila melanog	AAK88737 AAS31771 ABN90126 ABL03049	222	555 555 648	82.2 82.2 82.2	14.8 14.8 14.8	44 44 44 45	C
MAGE-B Clus ACNPV ORF 5 Vancomycin	AAV02032 AAT13658 AAV15410	17	40352 420 540		14.8 14.8	40	O
Enterococcus	AAX13092	20	9021		155	38	
Human	AAS35832	22	23432	•	٠.	3 G	
Drosophila melanog	ABL06028	23	20706		15.4	ω 5	()
Human	AAH48622	22	16951		15.4	ω ι 4- ι	o c
Drosophila melanog	ABL06029	ა გ ა	15441	9 85 5 6	15.4	ມ ພ ດ	,
Human	AAK81696	22	10669		15.4	31	•
Human	AAK76914	22	10669		15.4	30	.,
Human	ABK09799	24	6773		15.4	29	
Human	AAA09326	21	6773		15.4	28	
Drosophila melanog	ABL23364	23	6313		15.4	27	C
Drosophila	ABL23365	23	2757		15.4	26	``
Knockout mouse dis	ABQ72971	24	1953		15.4	25	
Mammalian AMPK	AAT85925	18	1647	٠	15.4	24	
Human	ABS24809	24	560	٠	15.4	23	
Human	ABS11794	24	560		15.4	22	
Probe	AAI57326	22	560	85.6	15.4	21	
Probe	AAI43673	22	560		15.4	20	
Probe	AAI28281	22	560		15.4	19	
Probe	AAI18558	22	560	•	15.4	18	
Human	AAK51270	22	560		15.4	17	
Human	AAK37803	22	560	• •	15.4	16	
Human	AAK25265	22	560	85.6	15.4	15	
Human	AAK12088	22	560		15.4	14	
Probe	ABA41138	22	560	•	15.4	13	
Probe	ABA30755	22	560	٠	15.4	12	
Human	9	22	560	85.6	15.4	11	
Human	ABA63560	22	560	85.6	15.4	10	

ALIGNMENTS

RESULT 1 ABK14145

ABK14145 standard; DNA; 18

ВP

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Chlorinated ethylene-decomposing bacteria; 16S rRNA; 16S rDNA; ss; probe; PCR; primer; soil; underground water; chlorinated ethylene; KWI-De3; chlorinated ethane; Dehalococcoides.
                    WPI; 2002-173127/23.
                                                                                        24-JUL-2000; 2000JP-0227580.
09-MAR-2001; 2001JP-0066001.
                                                                                                                         23-JUL-2001; 2001EP-0117844.
                                                                                                                                                                      EP1176216-A2
                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                               Chlorinated ethylene-decomposing bacteria detection DNA KWI-De3
                                                                                                                                                                                                                                                                                      08-MAY-2002
                                          Nakamura K, Ueno T;
                                                                                                                                                30-JAN-2002.
                                                                                                                                                                                                                                                                                                              ABK14145;
                                                                  (KURK ) KURITA WATER IND LTD
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New nucleic acid for detecting chlorinated ethylene-decomposing

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RESULT 2
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ID AAC6
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Matches 18
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The present sequence represents the 16S rDNA profile of Dehalococcoides ethenogenes strain PL, isolated from soil surrounding an industrial site. The 16S rDNA profile is linked to dechlorinating activity. Bacterial strain comprising the 16S rDNA sequence of the invention are useful for the dechlorination of chlorinated compounds such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                16S rDNA; dechlorinating activity; chlorinated compound; vinyl chloride; carbontetrachloride; tetrachloroethane; chloroform; dichloromethane; trichloroethane; dichloroethylene; chlorinating bacteria; ss.
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                                                                                                                              New 16S rDNA profile derived from Dehalococcoides ethenogenes indicative of a dechlorinating bacterial strain - \,
                                                                                                                                                                                  WPI; 2001-024581/03
                                                                                                                                                                                                                                                                                                                  13-APR-2000;
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                                                                                                 1; Page 47;
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Best Local
                                                                                                                       ethenogenes strain DAB, isolated from soil surrounding an industrial site. The 165 rDNA profile is linked to dechlorinating activity. Bacterial strain comprising the 165 rDNA sequence of the invention are useful for the dechlorination of chlorinated compounds such as carbontetrachloride, tetrachlorocethane, chloroform, dichloromethane, critchlorocethane, dichlorocethane, vinyl chloride, and chlorocarbatics. The 165 rDNA sequence is also useful for identification of new chlorinating bacteria, as well as sub-typing strains of Dehalococcoides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       trichloroethane, dichloroethylene, vinyl chloride, and chloroaromatics. The 16S rDNA sequence is also useful for identification of new chlorinating bacteria, as well as sub-typing strains of Dehalococcoides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16S rDNA; dechlorinating activity; chlorinated compound; vinyl chloride; carbontetrachloride; tetrachloroethane; chloroform; dichloromethane; trichloroethane; dichloroethylene; chlorinating bacteria; ss.
                                                                                       Sequence 1212 BP; 318 A;
                                                                                                                                                                                                                               The present sequence represents the 16S rDNA profile of Dehalococcoides
                                                                                                                                                                                                                                                         Claim 1; Page 48; 55pp;
                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                                                                                                                                                                                                                                                                                    Hendrickson ER,
                                                                                                                                                                                                                                                                                                                                                                                                                               13-APR-2000; 2000WO-US09883.
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cative of a dechl
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1 GCTTCGGGAAACTGAAGG 18
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                                                                                                                                                                                                                                                                                  dechlorinating bacterial strain
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RESULT 5
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AAC62242
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                                                                      16S rDNA; dechlorinating activity; chlorinated compound; vinyl chloride; carbontetrachloride; tetrachloroethane; chloroform; dichloromethane; trichloroethane; dichloroethylene; chlorinating bacteria; ss.
                                                                                                                                                                                                                             A 16S rDNA sequence indicative of a chlorinating bacterial strain.
Dehalococcoides ethenogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 48-49;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         carbontetrachloride;
trichloroethane; dicl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A 16S rDNA sequence indicative of a chlorinating bacterial strain.
                                                                                                                                                                                                                                                                                                                            19-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC62243 standard; DNA; 1212 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-MAR-2001 (first entry)
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bacteria, as well as sub
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       site.
New 16S rDNA profile derived from Dehalococcoides ethenogenes and
                                                                                                                                                                                                        Dehalococcoides ethenogenes
                                                                                                                                                                                                                                   trichloroethane; dichloroethylene; chlorinating
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 49; 55pp; English.
                                                  Hendrickson ER,
                                                                           (DUPO ) DU PONT
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                                            The present sequence represents the 16S rDNA profile of Dehalococcoides ethenogenes strain 195. The 16S rDNA profile is linked to dechlorinating activity. Bacterial strain comprising the 16S rDNA sequence of the invention are useful for the dechlorination of chlorinated compounds such as carbontetrachloride, tetrachloroethane, chloroform, dichloromethane, trichloroethane, dichloroethylene, vinyl chloride, and chloroaromatics. The 16S rDNA sequence is also useful for identification of new chlorinating bacteria, as well as sub-typing strains of Dehalococcoides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16S rDNA; dechlorinating activity; chlorinated compound; vinyl chloride; carbontetrachloride; tetrachloroethane; chloroform; dichloromethane; trichloroethane; dichloroethylene; chlorinating bacteria; ss.
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                                ethenogenes
                                                                                                                                                                                                                              New 16S rDNA profile derived from Dehalococcoides ethenogenes indicative of a dechlorinating bacterial strain -
                                                                                                                                                                                                                                                                                                               Hendrickson ER,
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RESULT 9

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ABN87663/c
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Best Local S
Matches 18
                                                             identifying, diagnosing, monitoring, staging, imaging, and treating prostate cancer and non-cancerous disease states in prostate tissue; for identifying prostate tissue; for monitoring, identifying and/or designing agonists and antagonists of the polypeptides; in gene therapy; in producing transgenic animals and cells; for producing engineered prostate tissue for treatment and research; and as elements in an array or computer program for pattern recognition of prostate disorders. The nucleic acids may be used as hybridisation probes to detect, characterise and quantify hybridising nucleic acids in, and isolate hybridising nucleic acids from, both genomic and transcript-derived nucleic acid
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Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New prostate-specific nucleic acids and polypeptides, useful for identifying, diagnosing, monitoring, staging, imaging, and treat prostate cancer and non-cancerous disease states in prostate tis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human prostate specific gene
                                                                                                                                                                                                                                                                                               polypeptides and compositi
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cancer;
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A; 73 C;
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                                                                                                                                                                                                                                                                                                      ons from the present invention can be used for
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64 G; 51 T; 0 other;
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RESULT 10
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Human; foetal liver; gene expression; single exon nucleic acid probe;
                              Human foetal liver single exon nucleic acid probe #11865.
                                                                   01-FEB-2002
                                                                                                                                                                                                                                                                                                                             Sequence 531 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and ABB79192 to ABB79295 represent human prostate-specific proteins (I) from the present invention. (I) and (II) have cycostatic activity: (I) can be used in gene therapy. The prostate-specific nucleic acids, polypeptides and compositions from the present invention can be used for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New prostate-specific nucleic acids and polypeptides, useful for identifying, diagnosing, monitoring, staging, imaging, and treating prostate cancer and non-cancerous disease states in prostate tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; prostate specific gene; prostate specific protein; PSG; PSP; prostate cancer; chromosome 8; gene; ss.
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                                                                                                                            ABA63560 standard;
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16; Conser
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                                                               (first entry)
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                                                                                                                            DNA;
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94.1%;
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                                                                                                                                                                                                                                                                                             Length 531;
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Matches
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04 - FEB - 2000;
26 - MAY - 2000;
30 - JUN - 2000;
03 - AUG - 2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fetal liver. The present sequence is a single exon nucleic acid probe of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid probe of the invention
                                                                                                                                                                        09-AUG-2001.
                                                                                                                                                                                                                      WO200157277-A2
                                                                                                                                                                                                                                                                                                                                                                Human foetal liver single exon nucleic acid probe #24935.
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                                                                                                                        30-JAN-2001; 2001WO-US00669
                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                     Human; foetal liver;
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26-MAY-2000;
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27-SEP-2000;
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2000US-0207456.
2000US-0608408.
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2000US-0234687.
2000US-0236359.
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94.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 16
                                                                                                          04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
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27-SEP-2000;
04-OCT-2000;
                                                                                                                                                             30-JAN-2001;
                                                                                                                                                                                 09-AUG-2001.
                                                                                                                                                                                                     WO200157274-A2
                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                           congenital heart
                                                                                                                                                                                                                                                     cardiovascular
                                                                                                                                                                                                                                                              Human; gene expression; heart; microarray; vascular system;
                                                                                                                                                                                                                                                                                   Probe #9221
                                                                                                                                                                                                                                                                                                       23-JAN-2002
                                                                                                                                                                                                                                                                                                                          ABA30755;
                                                                                                                                                                                                                                                                                                                                            ABA30755 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        probe of the invention.

Note: The sequence data for this patent printed specification, but was obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a single exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 4; SEQ ID NO 24935; 639pp + sequence listing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human genome-derived single exon nucleic acid probes useful analyzing gene expression in human fetal liver -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Penn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MOLE-)
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                    2001-488899/53
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                                                                                                                                                                                                                                                                                                                                                                                                                                    16; Conservative
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                                                         MOLECULAR DYNAMICS
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                                                                                                                                                                                                                                                                                                                                                                                              GCTTCCGGAAACTGAAG 80
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                                       Hanzel
                                                                           2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234686.
2000US-0234685.
2000US-02346359.
                                                                                                                                                                                                                                                                                  for
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2000US-0236359.
2000GB-0024263.
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                                                                                                                                                             2001WO-US00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                     disease; hypertension;
                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132 A; 134 C; 126 G;
                                     Š
                                                                                                                                                                                                                                            disease;
                                                                                                                                                                                                                                                                                                     entry)
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94.1%;
                                                                                                                                                                                                                                                                                  expression analysis in human
                                     Chen
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Pred. No. 2e+02;
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                                       DR
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                                                                                                                                                                                                                                                   cardiac arrhythmia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in electronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 other;
                                                                                                                                                                                                                                                                                  heart cell sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
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c format directly
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                                                                                                                                                                                                                                                            probe;
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Single exon nucleic acid

probes

for analyzing gene expression in

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RESULT 13
ABA41138
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Matches
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                          Human; gene expression; heart; microarray; vascular cardiovascular disease; hypertension; cardiac arrhyt congenital heart disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Note: The sequence data for this patent did not specification, but was obtained in electronic for at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  measuring human gene expression in a sample derived from human heart present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derifrom the human heart via microarrays. By measuring gene expression, probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular seeg. cardiovascular disease, hypertension, cardiac arrhythmias and
The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart. present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived.
                                                              Claim
                                                                                                Single exon nucleic acid
                                                                                                                        WPI; 2001-488899/53
                                                                                                                                                                                                                                                                                                                                                                                                                                           Probe #19604 for gene expression analysis in human heart cell sample
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABA41138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABA41138 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         congenital heart disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1;
                                                                                                                                                                       (MOLE-)
                                                                                                                                                                                                                                                                                              30-JAN-2001; 2001WO-US00666
                                                                                                                                                                                                                                                                                                                                              WO200157274-A2
                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      present invention relates to single exon nucleic acid probes for
                                                                                                                                                  SG,
                                                              4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GCTTCGGGAAACTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l Similarity
16; Conser
                                                                                                                                                                       MOLECULAR DYNAMICS INC
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                                                              SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВP;
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                                                              H
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                                                                                                                                                                                                                                             2000US-0207456.
2000US-0608408.
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                                                                                                                                                                                                            200005-0236359
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                                                              No 19604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132 A; 134
                                                                                                                                               DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85.6%;
                                                                                                                                               Chen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 15.4;
Pred. No. 2e
                                                                                                                                                Rank
                                                                                                for analyzing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sample derived from human heart.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2e+02;
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                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ot form part of the printed format directly from WIPO
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                                                                                                expression
                                                                                                                                                                                                                                                                                                                                                                                                                    system;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      560;
                                                                                                                                                                                                                                                                                                                                                                                                                   probe;
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GCTTCGGGAAACTGAAG

17 0

Query Match Best Local Matches

16;

Conservative

Similarity

85.6%; 94.1%;

Score 15.4; Pred. No. 2e

2e+02;

DB

22; 1;

Length Indels

560; 0,

Gaps

0

Mismatches

Sequence

88888888

congenital heart disease.

Note: The sequence data for this patent did not form specification, but was obtained in electronic format

part of the printed directly from WIPO

system

ftp.wipo.int/pub/published_pct_sequences.

560 BP; 132 A; 134 C; 126 G; 168 T; 0 other;

from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular systems; cardiovascular disease, hypertension, cardiac arrhythmias and

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RESULT 14
AAK12088
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Query Match
Best Local Similarity
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
                                                                                                                                         which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is one of the probes of the
                                                                                                                                                                                                                            The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may easily the discount of the content of the discount of the content of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; brain expressed exon; gene expression analysis; probe;
microarray; Alzheimer's disease; multiple sclerosis; schizophrenia;
                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                         Single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       epilepsy; cancer;
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                                                                                                                                                                                                                                                                                                                                           Example 4;
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27-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human brain expressed single exon probe SEQ ID NO: 12079.
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                                                                                                                                                                                                                                                                                                                                                                                                                      exon nucleic acid probes
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                                                                                                                                                                                                                                                                                                                                      SEQ ID NO: 12079; 650pp + Sequence Listing;
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2000US-0234687.
2000US-0236359.
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2000US-0207456.
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  94
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     . 68;
                                                                              134 C;
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  Score 15.4;
Pred. No. 2e
                                                                              126 G;
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                                                                              168
                                                                              .
                          DB 22;
                                                                              0 other;
                          Length 560;
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Search completed: June Job time: 245 secs

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26-MAY-2000;
30-JUN-2000;
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21-SEP-2000;
27-SEP-2000;
                                                                            Sequence 560
                                                                                                       diseases such as Alzheimer's disease, epilepsy and cancers. The present sequ
                                                                                                                           probes which are derived from genomic sequences brain. They can be used to measure gene expressi which may enable the diagnosis and improved treater
                                                                                                                                                        The
                                                                                                                                                                                                       Single exon nucleic acid probes for analyzing gene expression
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                                                                                                                                                                                                                                                                                                                                                                                                                                           epilepsy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; brain expressed exon; gen microarray; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAK25265;
                                                                                                                                                                           Example 4; SEQ ID
                                                                                                                                                                                               brains
                                                                                                                                                                                                                                                                                     04-OCT-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human brain expressed single exon probe SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-NOV-2001
                                                                                                                                                                                                                                                                  (MOLE-)
                                               Local
                                                                                                                                                       present invention provides a number of single exon nucleic
                                                                                                                                                                                                                                               SG,
 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64
                                      . Similarity
16; Conserv
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                                                                                                                                                                                                                                                                  MOLECULAR DYNAMICS INC
GCTTCGGGAAACTGAAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard; DNA; 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTCCGGAAACTGAAG
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                                                                                                                                                                                                                                                                                   2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0234687.
2000US-02346359.
                                      Conservative
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                                                                            BP;
                                                                                                                                                                                                                                                                                                                                                                2001WO-US00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                            132 A; 134 C;
                                                                                                                                                                           NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                             SS.
                                              85.6%;
                                                                                                                                                                           25256; 650pp + Sequence Listing;
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                                                                                                        present sequence
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                                                        Score 15.4;
                                              Pred.
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                                                                             126
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     multiple sclerosis; schizophrenia;
                                              ŏ.
                                                                                                                         mic sequences expressed in the human gene expression in brain cell samples improved treatment of nervous system
                                                                           ç;
                                                                            168
                                                                                                       multiple sclerosis, schizophrenia, uence is one of the probes of the
                                                         DВ
                                                                            τ,
                                                        22;
                                                                            0 other;
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Match Length
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:/cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
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:/cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
:/cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
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Copyright (c) 1993 - 2003 Compugen
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Sequence 2, Appli
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9 US-10-060-036-2049 10 US-09-864-761-12485	9 US-10-098-263B-72849 10 US-09-878-574-14116	10 US-09-967-013-5 9 US-09-373-658-23	10 US-09-895-072-14 10 US-09-986-552-14	9 US-09-938-842A-4533	9 US-10-198-846-12484	9 US-10-198-846-8463	9 US-09-918-995-32231	9 US-09-918-995-829	9 US-09-918-995-33990	9 US-09-918-995-5841	10 US-09-795-686-1	10 US-09-795-668-1	9 US-09-946-807-1	10 US-09-759-667A-1	9 US-10-198-846-10393	10 US-09-759-667A-2	9 US-09-938-842A-1109	10 US-09-764-887-101	9 US-10-073-961-101	10 US-09-070-927A-155
Sequence 2049, Ap Sequence 12485, A	Sequence 72849, A Sequence 14116, A	Sequence 5, Appli Sequence 23, Appl	Sequence 14, Appl Sequence 14, Appl		Sequence 12484, A	8463,	Sequence 32231, A	Sequence 829, App	Sequence 33990, A		•	Sequence 1, Appli	Sequence 1, Appli	Sequence 1, Appli	Sequence 10393, A	Sequence 2, Appli	Sequence 1109, Ap	Sequence 101, App	Sequence 101, App	Seguence 155, App

ALIGNMENTS

US-09-911-860A-3

Sequence 3, Application US/09911860A Publication No. US20030104383A1 GENERAL INFORMATION:

APPLICANT: Nakamura, Kanji APPLICANT: Ueno, Toshihir

RESULT 2
US-10-061-071-2
; Sequence 2, Application US/10061071
; Publication No. US20030077601A1
; GENERAL INFORMATION:
; APPLICANT: E.I. DUPONT DE NEMOURS & COMPANY Вþ Ş ; OTHER INFORMATION: primer US-09-911-860A-3 Query Match Best Local Similarity Matches 18; Conserv SEQ ID NO 3 APPLICANT: Ueno, Toshihiro
APPLICANT: Ueno, Toshihiro
TITLE OF INVENTION: Nucleic Acid, Nucleic Acid for Detecting Chlorinated EthyleneTITLE OF INVENTION: Bacteria, Probe, Method of Detecting Chlorinated Ethylene-Dec
TITLE OF INVENTION: and Method of Decomposing Chlorinated Ethylene or Ethane
FILE REFERENCE: 9659/0L377-USO
CURRENT APPLICATION NUMBER: US/09/911,860A
CURRENT FILING DATE: 2002-12-17
CURRENT FILING DATE: 2002-13-17 PRIOR APPLICATION NUMBER: JP2000-227580
PRIOR FILING DATE: 2000-07-24
PRIOR APPLICATION NUMBER: JP2001-056001
PRIOR FILING DATE: 2001-03-09
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn version 3.1 LENGTH: 18 TYPE: DNA ORGANISM: Artificial Sequence FEATURE: Conservative 100.0%; 0, Score 18; Pred. No. Mismatches 9; 0, Length 18; Indels 0 Gaps 0

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; ORGANISM: Dehalococcoides ethenogenes strain
US-10-061-071-2
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; ORGANISM: Dehalococcoides ethenogenes strain DAB
US-10-061-071-4
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                                                                                                                          Sequence 5, Application US/10061071 Publication No. US20030077601A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/061,071
CURRENT FILING DATE: 2002-01-29
PRIOR APPLICATION NUMBER: US 60/129,511
PRIOR FILING DATE: 1999-04-15
PRIOR APPLICATION NUMBER: 60/129,511
PRIOR FILING DATE: 1999-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: NUCLEIC ACID FRAGMENTS FOR THE IDENTIFICATION OF DECHLORINATING TITLE OF INVENTION: BACTERIA FILE REFERENCE: BC1002 US CIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: E. APPLICANT: H
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PRIOR FILING DATE: 1999-04-15
PRIOR APPLICATION NUMBER: 60/129,511
PRIOR FILING DATE: 1999-04-15
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CURRENT APPLICATION NUMBER: US/10/061,071
                               APPLICANT: HENDRICKSON, EDWIN
TITLE OF INVENTION: NUCLEIC ACID FRAGMENTS FOR
TITLE OF INVENTION: BACTERIA
FILE REFERENCE: BC1002 US CIP
                                                                                        APPLICANT: E.I. DUPONT DE NEMOURS & COMPANY APPLICANT: HENDRICKSON, EDWIN
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ITLE OF INVENTION: NUCLEIC ACID FRAGMENTS FOR THE IDENTIFICATION OF DECHLORINATING
ITLE OF INVENTION: BACTERIA
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HENDRICKSON, EDWIN
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US-10-061-071-3
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                       CURRENT APPLICATION NUMBER: US/10/061,071
CURRENT FILING DATE: 2002-01-29
PRIOR APPLICATION NUMBER: US 60/129,511
PRIOR FILING DATE: 1999-04-15
PRIOR APPLICATION NUMBER: 60/129,511
PRIOR FILING DATE: 1999-04-15
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PRIOR FILING DATE: 1999-04-15
NUMBER OF SEQ ID NOS: 103
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CURRENT FILING DATE: 2002-01-29
PRIOR APPLICATION NUMBER: US 60/129,511
PRIOR FILING DATE: 1999-04-15
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NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                      FILE REFERENCE: BC1002 US CIP
                                                                                                                                                                                                                                                                                                                                                              APPLICANT: E.I. DUPONT DE NEMOURS & COMPANY APPLICANT: HENDRICKSON, EDWIN
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TITLE OF INVENTION: NUCLEIC ACID FRAGMENTS
TITLE OF INVENTION: BACTERIA
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SOFTWARE:

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; ORGANISM: Dehalococcoides ethenogenes strain V/SFD
US-10-061-071-3
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Best Local Similarity 100.
Thes 18; Conservative
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LENGTH: 1443
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                                                                           NUMBER OF SEQ ID NOS: 15775
SEQ ID NO 6798
LENGTH: 207
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                                                                                                                             APPLICANT: Byrum, Joseph R.
APPLICANT: La Rosa, Thomas J.
APPLICANT: Thompson, Michael D.
APPLICANT: Thompson, Michael D.
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated with
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(15401)B
CURRENT APPLICATION NUMBER: US/09/878,574
CURRENT FILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: 09/333,535
PRIOR FILING DATE: 1999-06-14
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CURRENT FILING DATE: 2002-01-29
PRIOR APPLICATION NUMBER: US 60/129,511
PRIOR FILING DATE: 1999-04-15
PRIOR APPLICATION NUMBER: 60/129,511
PRIOR APPLICATION NUMBER: 60/129,511
PRIOR FILING DATE: 1999-04-15
TYPE: DNA
ORGANISM: Glycine max
OTHER INFORMATION: Clone ID: 701099017H1
-09-878-574-6798
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Pred. No.
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                                                                   ; NAME/KEY: misc_feature
; LCCATION: (1)...(459)
; OTHER INFORMATION: n = A,T,C or
US-09-918-995-36193
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                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 36193
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LENGTH: 244
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                                                                                                                                  LENGTH: 459
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
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                                                                                                                                                                                                                                            APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REFERENCE: 20411-756
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR PILING DATE: 1999-01-20
PRIOR FILING DATE: 1999-01-20
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APPLICANT: Liu, Chenghua
TITLE OF INVENTION: Compositions and Methods Relating to
TITLE OF INVENTION: Genes and Proteins
TILE REFERENCE: DEX-0261
CURRENT APPLICATION UNMBER: US/10/011,585A
CURRENT FILING DATE: 2002-03-14
CURRENT FILING DATE: 2002-03-14
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85.6%;
l Similarity 94.1%;
l6; Conservation
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Pred. No. 61;
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                    Pred. No.
                                    Score 15.4;
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                                    DB 9;
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1 GCTTCGGGAAACTGAAG

GCTTCGGGAAACAGAAG 128

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RESULT 13
US-10-011-585A-15
; Sequence 15, Application US/10011585A
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; SOFTWARE: COTIXA Invention Disclosure Database
; SEQ ID NO 663
; LENGTH: 507
; TYPE: DNA
; ORGANIZSM: Homo sapiens
US-09-998-598-663
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Best Local :
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APPLICANT:
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TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: THERRBY AND DIAGNOSIS OF KID
FILE REFERENCE: 210121.572
FULL REFERENCE: 210121.572
FULL REFERENCE: 210121.572
FULL REFERENCE: 210121.572
FULL REFERENCE: 2002-03-19
NUMBER OF SEQ ID NOS: 1863
                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/998,598
CURRENT FILING DATE: 2001-11-16
NUMBER OF SEQ ID NOS: 2606
                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Meagher, Medelein Joy
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF COLON CANCER
FILE REFERENCE: 210121.561
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NAME/KEY: misc_feature

LOCATION: 318, 332, 427, 437, 443, 461, 463, 470

OTHER INFORMATION: n = A,T,C or G
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16; Conserv
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16; Conservative
                                                                                                                   GCTTCGGGAAACTGAAG 17
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Gaiger, Alexander
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Pred. No. 65;
0; Mismatches
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Pred. No. 6
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; NAME/KEY: unsure
; LOCATION: (217)
; OTHER INFORMATION: a,
US-10-011-585A-15
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Best Local Similarity
Matches 16; Conserv
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                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K
APPLICANT: Chen, Wensheng
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NUMBER OF SEQ ID NOS: 245
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                                                                  PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR FILING DATE: 2001-01-30
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APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
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PRIOR FILING DATE: 2000-10-04
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                                                      PRIOR APPLICATION NUMBER: PCT/US01/00664
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LOCATION: (211)..(212)
OTHER INFORMATION: a,
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LOCATION: (202)
OTHER INFORMATION: a,
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ORGANISM: Homo sapiens
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                                                                                                                                                    APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00669
FILING DATE: 2001-01-30
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Liu, Chenghua
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Pred. No. 65;
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SEQ ID NO 9221
: LENGTH: 560
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR FILING DATE: 2000-08-03
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Best Local :
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APPLICANT:
                                                                                                                                                                 PRIOR
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OTHER INFORMATION:
OTHER INFORMATION:
                                                                            FILING DATE: 2000-10-04
APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
APPLICATION NUMBER: PCT/US01/0066
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FILING DATE: 2000-99-21
APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-06-30
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                                      APPLICATION NUMBER: PCT/US01/00667
                                                             FILING DATE:
                                                                                                                                                             APPLICATION NUMBER: GB 24263.6
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APPLICATION NUMBER: PCT/US01/00668
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16; Conserv
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Chen, Wensheng
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                                                             2001-01-30
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94.1%;
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PCT/US01/00664
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IN FETAL LIVER, SIGNAL = 1.5
D IN ADULT LIVER, SIGNAL = 1.5
D IN BRAIN, SIGNAL = 1.5
IN PLACENTA, SIGNAL = 1.5
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Pred. No. 65;
0; Mismatches
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Matches
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LENGTH: 560
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-66-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
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OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
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APPLICATION NUMBER: PCT/US01/00668
FILING DATE: 2001-01-30
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APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
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                                                                                                                                                                                                                                                                                                          INFORMATION:
64
                                                                                                                                 l Similarity
16; Conserv
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SEQ ID NOS: 49117
   GCTTCCGGAAACTGAAG
                                   GCTTCGGGAAACTGAAG
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                            NN: EXPRESSED IN LUNG, SIGNAL = 2.6

NN: EXPRESSED IN BONE MARROW, SIGNAL = 1.7

NN: EXPRESSED IN HEART, SIGNAL = 1.3

NN: EXPRESSED IN FETAL LIVER, SIGNAL = 2.4

NN: EXPRESSED IN ADULT LIVER, SIGNAL = 2.1

NN: EXPRESSED IN BRAIN, SIGNAL = 1.5

NN: EXPRESSED IN PLACENTA, SIGNAL = 2

NN: EXPRESSED IN HELA, SIGNAL = 1.9

NN: EXPRESSED IN HELA, SIGNAL = 1.9
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NIMBER: US 09/608,408
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Pred. No. 65;
0; Mismatches
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Search completed: June 19, 2003, 08:44:28 Job time: 158 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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seq length: 2000000000
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Match Length DB
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     Issued_Patents_NA:*
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Copyright (c) 1993 - 2003 Compuc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
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    1647
6773
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US-09-166-350-27
US-08-846-111D-15
US-09-443-077-15
US-09-103-840A-2
4 US-09-103-840A-2
4 US-09-103-840A-1
3 US-08-781-891-79
US-09-791-211-3
  4 US-09-103-840A-2
4 US-09-103-840A-1
US-09-103-840A-1
US-08-700-575-21
US-07-807-043B-7
US-08-142-366A-7
US-08-142-366A-7
US-08-056-7-727-7
US-08-056-1057-23
US-08-056-1057-23
US-08-056-105-4
US-08-627-820-23
US-08-627-820-23
US-08-627-820-39
US-09-132-6149
US-09-132-6149
US-09-132-6149
US-09-132-6149
US-09-132-6149
US-09-061-709-8
US-09-061-709-8
US-09-061-709-8
US-09-061-709-6
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108.239 Million cell updates/sec
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Sequence 44, Appl
Sequence 15, Appl
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Sequence 7, Appli
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	242114511168841884
ALIGNMENTS	US-08-841-178-27 US-08-906-517-3 US-08-841-178-26 US-08-8459-953-2 US-08-459-415-2 US-09-066-687-2 PCT-US95-11231-2 US-07-807-0438-8 US-08-190-4411A-1 US-08-299-849B-8 US-08-650-024-1 US-08-967-727-8 US-08-967-727-8 US-08-957-727-8 US-08-557-139-1 US-08-557-139-1 US-08-655-759-19 US-08-655-759-19 US-08-655-759-19 US-08-655-759-19 US-08-762-500-19
	Sequence 27, Appli Sequence 3, Appli Sequence 26, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Sequence 1, Appli Sequence 8, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 3, Appli

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; TOPOLOGY:
; ANTI-SENSE:
US-09-101-146-44
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US-09-101-146-44
Query Match
Best Local S
Matches 16
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Patent No. 6124125
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC

OPERATING SYSTEM: WINDOWS 95

SOFTWARE: WORDPERFECT 6.0 FOR WINDOWS

SOFTWARE: WORDPERFECT 6.0 FOR WINDOWS

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/101,146

FILING DATE: OCTOBER: US/09/101,146

FILING DATE: OCTOBER: PN7450

FILING DATE: DATA: NOTA: NO
                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (856) 810-1515
TELEFAX: (856) 810-1454
INFORMATION FOR SEO ID NO: 44:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dartmouth College, St. Vincents Institute of APPLICANT: Medical Research, Kemp et al. TITLE OF INVENTION: No. 6124125el AMP Activated Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Jane Massey Licata,
STREET: 66 E. Main Street
CITY: Marlton
STATE: NJ
                                                                                                                                                                                                                                                                                         TYPE: Nucleic acid
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
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Conservative
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                                                                                                                                                                                                                                                          Linear
                                   85.6%;
                                        Score 15.4;
Pred. No. 3
Mismatches
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AMP Activated Protein Kinase
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                                                                                Length 1647;
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Gaps

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RESULT 3
US-08-846-111D-15
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; ORGANISM: Homo sapiens
US-09-166-350-27
                                                COMPUTER: IBM
COMPUTER: IBM
OPERATING SYSTEM: PC-DOS
OPERATING SYSTEM: PC-DOS
OPERATING SYSTEM: PC-DOS
OPERATING SYSTEM: PC-DOS 6.0b
SOTWARE: Worddperfect For DOS 6.0b
CURRENT APPLICATION NUMBER: US/08/846,111D
FILING DATE: 25-APRIL-1997
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: 08/658,578
FILING DATE: 5-MAY-1996
PRIOR APPLICATION NUMBER: 08/403,388
FILING DATE: 14-MARCH-1995
FILING DATE: 14-MARCH-1995
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APPLICANT: Scanlan, Matthew
APPLICANT: Stockert, Elisabeth
APPLICANT: Old, Lloyd
APPLICANT: Jager, Elke
APPLICANT: Knuth, Alex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ouery Match
Best Local Similarity 94.1
Matches 16; Conservative
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Patent No. 64406
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 27
LENGTH: 6773
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NUMBER OF SEQ ID NOS: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Renal Cancer Associated Antigens and TITLE OF INVENTION: Uses Therefor FILE REFERENCE: L0461/7051
CURRENT APPLICATION NUMBER: US/09/166,350A
CURRENT FILING DATE: 1998-10-05
EARLIER APPLICATION NUMBER: US 09/166,350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tent No. 6017705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & I
                ATTORNEY/AGENT INFORMATION:
NAME: Hanson, No. 601770
REGISTRATION NUMBER: 30,
                                                                                                                                                                                                                                                                                                                          STATE: New ...
TP: 10022-7513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Isolated Nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                STREET:
 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4684 GCTTCGGGAAACAGAAG 4700
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805 Third Avenue
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94.1%;
                                 6017705man D.
   LUD 5444.1
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Pred. No. 3
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US-08-846-111D-15
                                                                                                                                          SEQUENCE DESCRIPTION: SEQ ID NO: US-09-443-077-15
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                                                                   Query Match
Best Local S
Matches 15
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: LUD 5444.1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 40352 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
Nes 15; Conserv
32274 CTTCGGGAAACTGAA 32288
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                                                                                                                                                                                                                                                                                                                                                          FILING DATE: <Unknown>
APPLICATION NUMBER: 08/403,388
FILING DATE: 14-MARCH-1995
ATTORNBY/AGENT INFORMATION:
NAME: Hanson, No. 6392016man D.
REGISTRATION NUMBER: 30,946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect For DOS 6.0b
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
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                                                                       . Similarity
15; Conserv
                                                                                                                                                                            LENGTH: 40352 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/443,077 FILING DATE: 26-Jun-2001 CLASSIFICATION: <Unknown>
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                                   CTTCGGGAAACTGAA 16
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10022-7513
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NYENTION: Isolated Nucleic Acid Molecules Which Are
Members Of The Mage-B Family and Uses Thereof
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                                                                                    83.3%; Score 15;
100.0%; Pred. No.
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Pred. No.
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                                                                                        DB 4;
76;
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US-08-781-891-79/c
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ORGANISM: Mycobacterium tuberculosis
OTHER INFORMATION: H37Rv
US-09-103-840A-1
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; OTHER INFORMATION: "n" bases at various positions throughout the sequence
; OTHER INFORMATION: represent a, t, c or g
US-09-103-840A-2
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Sequence 79, Application US/08781891 Patent No. 6090620
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Best Local Similarity
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APPLICANT: VENTER, John C.
TITLE OF INVENTION: DIA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION
TUBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
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APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CHEBERT AND TIVENTY OF THE PROPERTY OF THE PROP
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16; Conserv
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88.9%;
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88.9%;
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Pred. No. 6
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Pred. No. 6
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TOPOLOGY: US-08-781-891-79
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Best Local Similarity 93.8
Watches 15; Conservative
                                                                                                                                 SEQ ID NO 3
LENGTH: 87543
                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                      Sequence 3, Application US/09791211 Patent No. 6448080
                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/791,211
CURRENT FILING DATE: 2001-02-23
NUMBER OF SEQ ID NOS: 90
                                                                                                                                                                                                                                                    APPLICANT: Donna T. Ward APPLICANT: Andrew T. Wat
                                                                                                                                                                                                                      FILE REFERENCE:
                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (206) 682-60: INFORMATION FOR SEQ ID NO:
                                                                                                                                                                   NUMBER OF SEQ ID NOS:
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                              NAME/KEY: unsure
LOCATION: 7421
OTHER INFORMATION: unknown
                                                                                               ORGANISM: Homo sapiens
                                                                                   FEATURE:
                                                                                                                    TYPE: DNA
NAME/KEY: unsure LOCATION: 7427
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NAME: NO. 6090620tenburg Ph.D., Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 240052.419
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MEDIUM TYPE: Floppy disk
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TITLE OF INVENTION: GENE AND GENE PRODUCTS RELATED
TITLE OF INVENTION: WERNER'S SYNDROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
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OPERATING SYSTEM: PC-DOS/MS-DOS
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STATE: Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fu, Ying-Hui
Yu, Chang-En
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (206)
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                                                                                                                                                                                                                    ON: ANTISENSE MODULATION OF RTS-0205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              single
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Pred. No. 1
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Вb

INFORMATION: unknown

OTHER INFORMATION: NAME/KEY: unsure LOCATION: 29370 OTHER INFORMATION: N

unknown

unknown

OTHER INFORMATION: NAME/KEY: unsure LOCATION: 12742

unknown

OCATION: 11609 THER INFORMATION:

unknown

NAME/KEY: unsure LOCATION: 29422 OTHER INFORMATION: unknown

THER INFORMATION: unknown NAME/KEY: unsure OCATION: 29980 Unknown

AME/KEY: unsure OCATION: 29981 THER INFORMATION:

unknown

NAME/KEY: unsure LOCATION: 30136 OTHER INFORMATION: U NAME/KEY: unsure LOCATION: 30140 OTHER INFORMATION: U NAME/KEY: unsure LOCATION: 31205

unknown

THER INFORMATION: ME/KEY: unsure DCATION: 31206

unknown

unknown

HER INFORMATION: unknown

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RESULT 9
US-09-103-840A-2
; Sequence 2, Application US/09103840A
; Patent No. 6294328
; GENERAL INFORMATION:
; APPLICANT: FLEISCHMAN, Robert D.
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                                                                                                                                                                                                                                                       US-09-791-211-3
                                                                                                                                                                                      Ouery Match 80.0%;
Best Local Similarity 93.8%;
Matches 15; Conservative
                                                                                                                                                                                                                                                                  OTHER INFORMATION: UNAME/KEY: UNBUTE LOCATION: 86336
OTHER INFORMATION: UOTHER INFORMATION: U
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NAME/KEY: unsure
LOCATION: 59215
OTHER INFORMATION: 1
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LOCATION: 52786
OTHER INFORMATION:
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LOCATION: 68739
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: unsure LOCATION: 68733
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LOCATION: 68718
OTHER INFORMATION:
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LOCATION: 59235
OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: unsure
LOCATION: 79134
OTHER INFORMATION: unknown
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LOCATION: 69785
OTHER INFORMATION: unknown
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LOCATION: 68697
OTHER INFORMATION: unknown
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LOCATION: 68660
OTHER INFORMATION:
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LOCATION: 66614
OTHER INFORMATION:
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LOCATION: 63290
OTHER_INFORMATION: unknown
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LOCATION: 53384
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LOCATION: 54684
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76617 CTTTGGGAAACTGAAG 76602
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                                                                                                                                                                                        Score 14.4; DB 4; Pred. No. 1.7e+02; 0; Mismatches 1;
                                                                                                                                                                                                                       Length 87543;
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NAME/KEY: unsure LOCATION: 46808 OTHER INFORMATION: U NAME/KEY: UNSURE LOCATION: 46823

unknown

NAME/KEY: unsure LOCATION: 42164 OTHER INFORMATION:

unknown

NAME/KEY: unsure LOCATION: 39020 OTHER INFORMATION: unknown

NAME/KEY: unsure LOCATION: 42459 OTHER INFORMATION:

unknown

Gaps

0

NAME/KEY: unsure LOCATION: 46826 OTHER INFORMATION: unknown

OTHER INFORMATION:

unknown

NAME/KEY: unsure LOCATION: 34066 OTHER INFORMATION: UNAME/KEY: unsure LOCATION: 34072

unknown

AME/KEY: unsure OCATION: 33095 THER INFORMATION: unknown

HER INFORMATION: unknown

ME/KEY: unsure

HER INFORMATION:

unknown

VAME/KEY: unsure LOCATION: 36816 OTHER INFORMATION:

unknown

THER INFORMATION:

unknown

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; LENGTH: 4411529
; TYPE: DNA
; ORGANISM: Mycobacterium tuberculosis
; OTHER INFORMATION: H37Rv
US-09-103-840A-1
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US-08-700-575-21
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                                                                                                                                                                                                                                                                                        Sequence 21, Patent No. 5
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Best Local Similarity
Matches 15; Conserv
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SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: FRASER, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: FLEISCHMAN, Robert D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
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APPLICANT: VENSER, JOHN C.
TITLE OF INVENTION: DAN AEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: CDC 1551
OTHER INFORMATION: "n" bases at various positions throughout the sequence OTHER INFORMATION: represent a, t, c or g
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APPLICANT: Au-Young, Janice
APPLICANT: Bandman, Olga
APPLICANT: Hawkins, Phillip R.
APPLICANT: Wilde, Craig G.
APPLICANT: Hawkins, Phillip R.
APPLICANT: Hawkins, Phillip R.
APPLICANT: Hawkins, Phillip R.
APPLICANT: APPLICA
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15; Conserv
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5817479
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93.8%;
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Pred. No. 68;
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Pred. No. 68;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 7, Application US/07807043B Patent No. 5342774
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match 76.7%;
Best Local Similarity 88.2%;
Matches 15; Conservative
               FILING DATE: 19911212
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/764,364
FILING DATE: 23-SEPTEMBER-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/728,838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 415-845-4166 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: cDI
IMMEDIATE SOURCE:
LIBRARY: Rheumat
CLONE: 81865
                                                                                                                                                                   SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Rejection Antigens and Uses Thereof NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 219 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: BILLINGS, LUCY T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Boon, Thierry, Van den Eynde, Beno t
TITLE OF INVENTION: Tumor Rejection Antigen Precursors,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                      Cli.
STATE: Ne.
STATE: 10022
                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
CITY: New York City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 31/4 FC.
CITY: PALO ALTO
                                                                                                                                APPLICATION NUMBER: US/07/807,043B FILING DATE: 19911212
                                                                                                                                                                                                                                 COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: BILLINGS, LUCY J
REGISTRATION NUMBER: 36
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                         OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: INCYTE PHARMACEUTICALS, INC STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75 CTTCGGCAAAGTGAAGG 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 CTTCGGGAAACTGAAGG 18
                                                                                                                                                                                                                                                                                                    New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rheumatoid Synovium
                                                                                                                                                                                                                                 IBM
                                                                                                                                                                                                                                             Diskette, 5.25 inch, 360 kb storage
JMBER: 07/728,838
9-JULY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/700,575
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 13.8;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SP-100 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 219;
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:

07/705,702

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Query Match
Best Local Similarity
Watches 15; Conserve
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US-08-299-8498-7
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                                                                                                                              CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
108/037,230

FILING DATE: 26-MARCH-1993

PRIOR APPLICATION DATA:
APPLICATION DATA:
PILING DATE: 22-MAY-1992

PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
12-DECEMBER-1991

PRIOR APPLICATION DATA:
12-DECEMBER-1991

PRIOR APPLICATION DATA:
07/764 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAS: (212) 838-3884
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     quence 7, Appl
tent No. 56122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & L
                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/299,8498
FILING DATE: 1-SEPTEMBER-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 23-May-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hanson, No. 5342774man D.
REGISTRATION NUMBER: 30,946
REFERENCE/DOCKET NUMBER: LUD 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                            APPLICATION NUMBER: 07/764,364
FILING DATE: 23-SEPTEMBER-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                RIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM
OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: Si
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: New York
ZIP: 10022
                                     APPLICATION NUMBER: 07/728,838 APPLICATION NUMBER: 9-JULY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LE OF INVENTION: Isolated Nucleon Control of Invention: Determining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2361 GCTTTGGGAAACTGCAG 2377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GCTTCGGGAAACTGAAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEIC ACID
DEDNESS: singular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08299849B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      De Plaen, Etienne: Boon-Falleur, Thierry:
Leth , Bernard: Szikora, Jean-Pierre: De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chomez, Patrick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Diskette, 5.25 inch, 360 kb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.7%;
88.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated Nucleic Acid Molecules Useful In Determining Expression Of A Tumor Antigen Precursor
                                                                                                                                                                                                                                           PCT/US92/04354
                                                                                                                      07/764,364
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Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 2419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smet, Charles;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
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Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 7, Application US/08142368A Patent No. 5925729 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SIQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 2419 base pairs
                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 02-MAY-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: LUTELECOMMUNICATION INFORMATION:
 APPLICATION NUMBER: 07/705,702
FILING DATE: 23-May-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hanson, No. 5925729man D.
REGISTRATION NUMBER: 30,946
REFERENCE/DOCKET NUMBER: LUD 52
                                                                                                                                                          APPLICATION NUMBER: 07/807,043
FILING DATE: 12-DECEMBER-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/764,364
FILING DATE: 23-SEPTEMBER-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: genomic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/I
FILING DATE: 22-MAY-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: No. 10022
                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                             APPLICATION NUMBER: 07/728,838 APPLICATION NUMBER: 9-JULY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2361 GCTTTGGGAAACTGCAG 2377
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hanson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (212)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boon-Falleur, Thierry; Van der Bruggen, Thierry;
Van den Eynde, Beno t; Van Pel, Aline; De Plaen, Etienne;
Lurquin, Christophe; Chomez, Patrick; Traversari, Catia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.7%;
88.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rejection Antigens and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5612201man D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tumor Rejection Antigen Precursors,
                                                                                                                                                                                                                                                                                                      PCT/US92/04354
                                                                                                                                                                                                                                                                                                                                                                             US/08/142,368A
30,946
ER: LUD 5253.4-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.25 inch, 360 kb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LUD 5355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 13.8;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
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TELEPHONE: (212) 688-9200

(212) 688-9200 212) 838-3884

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RESULT 15
US-08-967-727-7
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                 AFFLANDEDNESS: Single

FILING DATE: 23-MAY-1991

ATTORNEY/AGENT INFORMATION:

NAME: Hanson, No. 6025474man D.

REGISTRATION NUMBER: 30,946

REFERENCE/DOCKET NUMBER: LUD 5353

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 688-9200

TELEFAX: (212) 688-9200

TELEFAX: (212) 838-3884

INFORMATION FOR SEQ ID NO: 7:

SEQUENCE CHARACTERISTICS:
LENGTH: 2419 base pairs
TYPE: nucleic acid
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/08967727 Patent No. 6025474
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                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/807,043
FILING DATE: 12-DECEMBER-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/764,365
FILING DATE: 23-SEPTEMBER-1991
PRIOR APPLICATION NUMBER: 07/728,838
APPLICATION NUMBER: 07/728,838
FILING DATE: 9-JULY-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/705,702
PRIOR APPLICATION NUMBER: 07/705,702
FILING DATE: 73-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 805 Third Avenue
CITY: New York City
STATE: New York
ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 2419 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: genomic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/967,727
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/037,230
FILING DATE: 26-MARCH-1993
APPLICATION NUMBER: PCT/US92/04354
FILING DATE: 22-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Gaugler, B atrice; Van den Eynde, Beno t;
APPLICANT: van der Bruggen, Pierre; Boon-Falleur, Thierry
TITLE OF INVENTION: Isolated Nucleic Acid Molecules Coding For
TITLE OF INVENTION: Tumor Rejection Antigen Precursor Mage-3 And Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GCTTCGGGAAACTGAAG 17
|||| ||||||||| ||
2361 GCTTTGGGAAACTGCAG 2377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SSEE: Felfe & Lynch
T: 805 Third Avenue
New York City
genomic DNA
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Search completed: June 19, 2003, 07:34:08
Job time: 99 secs

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seg length: 0
Maximum DB seg length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
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SUMMARIES

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ethylene-decomposing bacteria, probe, method of detecting chlorinated ethylene-decomposing bacteria, and method of	Nucleic acid, nucleic acid for detecting chlorinated	Nakamura, K.C. and Ueno, T.C.	1	artificial sequences.	synthetic construct	synthetic construct.		AX356919.1 GI:18674118	AX356919	Sequence 3 from Patent EP1176216.	AX356919 18 bp DNA linear PAT 13-FEB-2002		

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Miskin, I.P. and Head, I.M.
Rapid extraction of indigenous bacterial RNAs from fr
sediments and reverse transcriptase-polymerase chain
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                                                                                                                                                                                                                                                                                                                   Miskin, I.P. and Head, I.M. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                            extraction procedure and Microbiology 145 (Pt 8), 99392460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Miskin, I.P., Farrimond, P. and Head, I.M.
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                                                                                                                         /product="16S ribosomal RNA"
120 c 169 g 92 t
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/db_xref="taxon:32630"
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/db_xref="taxon:91597"
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                                                                                                         uncultured bacterium
Bacteria; environmental samples.

1 (bases 1 to 685)

1 (bases 1 to 685)

Dennis, P.C., Sleep, B.E., Fulthorpe, R.R. and Liss, S.N.
Phylogenetic Characterization of an Anaerobic Bacterial Consortium
Phylogenetic Characterization Concentrations of Tetrachloroethene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence. AF427935
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Phylogenetic characterization of microbial communities that phylogenetic characterization of molecular reductively dechlorinate TCE based upon a combination of molecular
               Submitted (11-NOV-2001) Department of Chemistry, Biology and Chemical Engineering, Ryerson Polytechnic University, 350 VI-
Street, Toronto, Ontario M5B 2K3, Canada
                                                       2 (bases 1 to 685)
Dennis, P.C., Sleep, B.E.,
Direct Submission
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18; Conserv
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Submitted (04-0CT-2001) Civil and
University of California at Berkel
94720-1710, USA
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1 (bases 1 to 584)
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/db_xref="taxon:77133"
/clone="2B"
Location/Qualifiers
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., Bhupathiraju,V.K.,
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Hall, Berkeley,
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/organism="uncultured

bacterium"

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Dehalococcoides ethenogenes.
Dehalococcoides ethenogenes
Bacteria; Dehalococcoides group; Dehalococcoides.
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Submitted (06-JUN-2001) Central R & D/ Corporate Center for Engineering Research, E.I. Du Pont de Nemours and Company, P.O. 6101, Glasgow Site, 300/318, Newark, DE 19714-6101, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hendrickson, E.R., Payne, J.A., Young, R.M., Starr, M.G., Fahnestock, S., Ellis, D.E. and Ebersole, R.C. Molecular Analysis of Dehalococcoides 16S Ribosomal DN Chloroethene-Contaminated Sites throughout North Ameri Appl. Environ. Microbiol. 68 (2), 485-495 (2002)
                                                                          AX039535 1212 bp
Sequence 2 from Patent WO0063443
AX039535
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/db_xref="taxon:171952"
/clone="DHC-nfdpc"
/country="USA: Niagara Falls, NY"
/note="isolated from chloroethene-contaminated
<1. >777
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/clone="TDC-S1:33"
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154 c 244 g 171 t
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134 c 219 g 149 t
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E.I. DU
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E.I. DU
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Sequence 5 from Patent WO0063443.
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                                                              Dehalococcoides ethenogenes
Dehalococcoides ethenogenes
Bacteria; Dehalococcoides gr
1 (bases 1 to 1212)
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E.I. DU PONT DE NEMOURS AND COMPANY
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Hendrickson, E.R. and Ebersole, R.C.
                                           Hendrickson, E.R. and Ebersole, R.C.
Nucleic acid fragments for the identification of dechlorinating
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Bacteria; Dehalococcoides group; Dehalococcoides
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PONT DE NEMOURS AND COMPANY
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PONT DE NEMOURS AND COMPANY
Location/Qualifiers
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/db_xref-"taxon:61435"
252 c 369 g 269 t 1 othe
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/organism="Dehalococcoides ethenogenes"

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                                                  Direct Submission
Submitted (04-OCT-2001) Civil and Environmental Engineering,
University of California at Berkeley, 631 Davis Hall, Berkeley,
94720-1710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
18; Conserv
                                                                                                                                                    Environ.
22093797
                                                                                                                                                                               Phylogenetic characterization of microbial communities reductively dechlorinate TCE based upon a combination
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                                                                                                    Alvarez-Cohen,L.
                                                                                                         Richardson, R.E., Bhupathiraju, V.K.,
                                                                                                                                                                                                            Alvarez-Cohen, L.
                                                                                                                                                                                                                      Richardson, R.E., Bhupathiraju, V.K.,
                                                                                                                                                                                                                                     Bacteria; environmental samples 1 (bases 1 to 1286)
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E.I. DU PONT DE NEMOURS AND COMPANY
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/db_xref="taxon:61435"
255 c 371 g 266 t
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253 c 371 g
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                                                                                                                                                                                                                                                                                                                                gene,
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                                                                                                                                                              l Similarity
18; Conserv
                                                                                                                                                                                                                                                                                                                                                           Submitted (06-JUN-2001) Central R & D/ Corporate Center for Engineering Research, E.I. Du Pont de Nemours and Company, P.O. 6101, Glasgow Site, 300/318, Newark, DE 19714-6101, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hendrickson, E.R., Payne, J.A., Young, R.M., Starr, M.G. Fahnestock, S., Ellis, D.E. and Ebersole, R.C. Molecular Analysis of Dehalococcoides 16s Ribosomal Chloroethene-Contaminated Sites throughout North Ame Appl. Environ. Microbiol. 68 (2), 485-495 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         uncultured Dehalococcoides sp. uncultured Dehalococcoides sp.
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/db_xref="taxon:171952"
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/db_xref="taxon:77133"
/clone="5G"
                        DCEH2 16S rRNA gene
                                                                                                                                                                                                                                                                                              /clone="DHC-lnz"
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18; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 1322) Windfuhr,C., Mau,M., Sc Anaerobic reductive decenriched mixed culture
                                                                                           Submitted (04-OCT-2001) Civil and Environmental University of California at Berkeley, 631 Davis
                                                                                                        Submitted (04-OCT-2001) Civil and
                                                                                                                                                2 (bases 1 to 1331)
Richardson, R.E., Bhu
                                                                                                                                                                                                                                                                                                                                                                                                AF427937 1331 bp DNA linear Bo
Uncultured bacterium clone 5H 16S ribosomal RNA gene,
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                                                                                                                        Direct Submission
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                                                                                                                                                                                          Environ. Sci. Technol. 22093797
                                                                                                                                                                                                                                reductively dechlorinate
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/product="16S ribosomal RNA"
/product="399 g 294 t
                          /organism="uncultured bacterium"
/db_xref="taxon:77133"
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            /clone="5H"
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/db_xref="taxon:103252"
/note="RFLP type 22;
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from TCE-dechlorinating consortium
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                                                                                                                                                                                                                                                         Uncultured Dehalococcoides gene, partial sequence. AF388531
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Bacteria; Dehalococcoides group; D
l (bases 1 to 135)
Hendrickson,E.R. and Ebersole,R.C.
Engineering Research, E.I. Du Pont de Ne
6101, Glasgow Site, 300/318, Newark, DE
                         Submitted (06-JUN-2001) Central R & D/ Corporate Center for
                                     Direct Submission
                                                 Hendrickson, E.R., Payne, J.A., Fahnestock, S., Ellis, D.E. and
                                                                                                                                                                              samples.
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/db_xref="taxon:61435"
288 c 403 g 296 t
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DE 19714-6101, USA
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REFERENCE AUTHORS KEYWORDS SOURCE ORGANISM RESULT 1 BB073520/c LOCUS COMMENT DEFINITION ACCESSION /ERSION TITLE JOURNAL Kiyosawa,H., Kojima,Y., Kondo,S., Koya,S., Kurihara,C., Kusakabe,M.
Matsuyama,T., Miki,R., Mizuno,Y., Nakamura,M., Oda,H., Okazaki,Y.,
Ono,T., Owa,C., Saito,H., Sakai,C., Sato,K., Shibata,K., Shibata,Y., Shigemoto,Y., Shinagawa,A., Shiraki,T., Sogabe,Y., Sugahara,Y.,
Suzuki,H., Suzuki,H., Tagawa,A., Takahashi,F., Tominaga,N., Toya,T., Tsunoda,Y., Watahiki,A., Watanabe,S., Yamamura,T., Yamanaka,I.,
Yasunishi,A., Yokota,T., Yoshida,K., Yoshiki,A., Yoshino,M., Muramatsu,M. and Hayashizaki,Y.
RIKEN Mouse ESTs (Konno,H., et al.)
Unpublished (2000)
Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic BB073520 RIKEN full-length enriched, adult male epididymis Mus musculus cDNA clone 9230109F19 3', mRNA sequence. BB073520 P., Endo,T., Fukuda,S., Fukunishi,Y., Hara,A., Hayatsu,N., Hirozane,T., Hori,F., Ishii,Y., Ishikawa,J., Ishikawa,T., Ito Izawa,M., Kadota,K., Kagawa,I., Kai,C., Kawai,J., Kikuchi,N., Konno, H., Aizawa, K., Akahira, S., Akiyama, J., Arakawa, T., Carninci Mus musculus BB073520 Mammalia; Eutheria; l (bases 1 to 248) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus BB073520.1 GI:8583518 house mouse. 248 bp mRNA linear EST 27-JUN-2000 Itoh, M.,

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Query Match
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Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J.,
TOMMATU,Y., Carrinci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thermostabilization and thermoactivation of thermolabile enzymes by trehalose and its application for the synthesis of full length CDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
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URL:http://genome.gsc.riken.go.jp/
Carninci.p., Nishiyama, Y., Westover, A., Itoh, M., Nagaoka, S., Sasaki, N., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
African clawed frog
                                   BG812827.1
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High-efficiency full-length cDNA cloning. Methods Enzymol. 303,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Automated filtration-based high-throughput plasmid preparation system. Genome Res. 9 (5), 463-470 (1999)
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                                                                                                                                                                                                                                                                                                                                                                             Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-"Site_1: Sall; Site_2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory
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FEATURES

RESULT 2 BG812827 LOCUS

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Matches

BASE COUNT

KEYWORDS

SOURCE VERSION ACCESSION DEFINITION

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Email: est@watson.wustl.edu
CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Cer
Clone distribution: Xenopus clones from this library are avail
through the I.M.A.G.E. Consortium/LLNL at: info@image.llnl.gov
High quality sequence stop: 432.
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                                                                                                                                                                         Kohara,Y., Shin-i,T., Kimura,T., Na
Medaka EST Project in Takeda's lab
Unpublished (2001)
Contact: Tadasu Shin-i
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WashU Xenopus EST project, 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. 1
                                 National Institute of Genetics
1111 Yata, Mishima, Shizuoka 4
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/note-"Organ: brain; Vector: pCMV-SPORT6; Site_1: Not1;
/note-"Organ: brain; Vector: pCMV-SPORT6; Site_1: Not1;
/note-"Organ: brain; Vector: pCMV-SPORT6; Site_1: Not1;
/note-"Organ: Note: This is a xenopus Gene Collection (XGC Technologies. Note: This is a xenopus Gene Collection (XGC Note: This is 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        location/Qualifiers
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'dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="taxon
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 17;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Craniata; Vertebrata; Euteleostomi;
Teleostei; Euteleostei; Neoteleostei;
ii; Percomorpha; Atherinomorpha;
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. 6.1e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                           Narita, T., Jindo, T. and Takeda, H.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9222
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                                                                                                                                                    ,Y. and Hayashizaki,Y.
Automated filtration-based high-throughput plasmid preparation
System Genome Res. 9 (5), 463-470 (1999)
Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning. Methods Enzymol. 303,
                                                                                                                                                                                                                                                                                                                                        Transcriptional sequencing: A method for DNA sequencing using RNA polymerase. Proc. Natl. Acad. Sci. U.S.A. 95 (7), 3455-3460 (1998) Itoh.M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIKEN Mouse ESTs (Konno, H., et al. 1999)
Unpublished (1999)
Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        URL:http://genome.gsc.riken.go.jp/
Sasaki,N., Izawa,M., Watahiki,M., Ozawa,K., Tanaka,T.,
Matsuura,S., Carninci,P., Muramatsu,M., Okazaki,Y. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AV288693 RIKEN full-length enriched, 11 days pregnant adult female ovary and uterus Mus musculus cDNA clone 5033414E09, mRNA sequence AV2886693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AV288693.1 GI:6299197
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                                                                                                                                19-44 (1999)
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                                                                                Please visit our web site (http://genome.rtc.riken.go.jp) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Oryzias latipes"
/strain="Hd-rR"
/db_xref="taxon:8090"
/clone="MF01SSB031013"
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/sex="mixture of female and male"
/tissue_type="whole embryo"
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94.48;
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Pred. No. 9.8e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Konno, H., Aizawa, K., Akahira, S., Akiyama, J., Arakawa, T., Carninci, P., Endo, T., Fukuda, S., Fukunishi, Y., Hara, A., Hayatsu, N., Hirozane, T., Hori, F., Ishi, Y., Ishikawa, J., Ishikawa, T., Itoh, M., Izawa, M., Kadota, K., Kagawa, I., Kai, C., Kawai, J., Kikuchi, N., Izawa, M., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kunihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kunihara, C., Kusakabe, M., Kunihara, C., Kusakabe, M., Kiyosawa, H., Kojima, Y., Kunihara, C., Kusakabe, M., Kunihara, C., Kusakabe, M., Kunihara, C., Kusakabe, M., Kunihara, C., Kusakabe, M., Kunihara, K., Kunihara, C., Kusakabe, M., Kunihara, K., Kunihara, C., Kusakabe, M., Kunihara, C., Kusakabe, M., Kunihara, C., Kusakabe, M., Kunihara, K., Kunihara, C., Kusakabe, M., Kunihara, K., Kunihara, C., Kusakabe, M., Kunihara, K., Kunihara, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB168908 RIKEN full-length enriched, adult male hypothalamus musculus cDNA clone A230002J20 3', mRNA sequence.
                                Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
                                                                                                                                                                                                                                                                                                                                        Matsuyama,T., Miki,R., Mizuno,Y., Nakamura,M., Oda,H., Okazaki,Y., Ono,T., Owa,C., Salto,H., Sakai,C., Sato,K., Shibata,K., Shibata,Y., Shigemoto,Y., Shinagawa,A., Shiraki,T., Sogabe,Y., Sugahara,Y., Suzuki,H., Tagawa,A., Takahashi,F., Tominaga,N., Toya, Suzuki,H., Suzuki,H., Tagawa,A., Takahashi,F., Tominaga,N., Toya, Suzuki,H., Suzuki,H., Matanabe,S., Yamamura,T., Yamamaka,I.
                                                                                                                                                            Contact: Yoshihide Hayashizaki
                                                                                                                                                                                        RIKEN Mouse ESTs (Konno, H., et al.)
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nmmalia; Eutheria;
(bases 1 to 243)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prepared and sequenced in Mouse Genome Encyclopedia
Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in
RIKEN, Division of Experimental Animal Research in Riken
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/dev_stage="11 days pregnant, adult"
/lab_host="DH10B"
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/organism="Mus musculus"
/strain="C57BL/6J"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex="female"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91.18;
94.48;
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Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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Pred. No. 1e+03;
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AUTHORS
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ORIGIN
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Best Local
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Thermostabilization and thermoactivation of thermolabile enzymes by trehalose and its application for the synthesis of full length cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki
        Konno, H.,
                                                                                     Mus musculus
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                                                                                                                                                                  musculus cDNA clone
BB201074
                                                              Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Nishiyama,Y., Westoyer,A.,
                                                Mammalia;
                                                                                                        nouse mouse
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Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning. Methods Enzymol. 303,

 and Hayashizaki, Y.

                         (bases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             visit our web site (http://genome.rtc.riken.go.jp) for
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="Site_1: Sall; Site_2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riker Genomic Sciences Center and Genome Science Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contributed to prepare mouse tissues. 1st strand primed with a primer [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-len-
                         1 to 244)
                                                Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nypothalamus"
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                                                                                                                                                GI:8866027
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ssue_type="hypothalamus"
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                                                                                                                                                                                                                                                                                                                                                                                                                               91.18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   c Sciences Center and Genome Science Laboratory in Division of Experimental Animal Research in Riken
                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                     18
Akahira, S., Akiyama, J., Arakawa, T., Carninci
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                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e and subsequently enriched for full-length by CDNA went through one round of normalization
                                                                                                                                                                                                                                                                                                                                                                                                                               Score 16.4; DB 10; Pred. No. 1e+03;
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                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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GCTTCGGGAAACTGAAGG

18

ORIGIN

Query Match Best Local 9 Matches

17;

Conservative

Similarity

91.18; 94.48;

Score 16.4; DB 10; Pred. No. 1e+03;

Mismatches

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Gaps

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244; 0;

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BASE COUNT
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URL:http://genome.gsc.riken.go.jp/
Carninci,P., Nishiyama,Y., Westover,A., Itoh,M.,
,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
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The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ,M., Muramatsu,M. and Hayashizaki,Y. RIKEN Mouse ESTs (Konno,H., et al.) Unpublished (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Thermostabilization and thermoactivation of thermolabile enzymes by
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-44 (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Automated filtration-based high-throughput plasmid preparation ystem. Genome Res. 9 (5), 463-470 (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High-efficiency
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ease visit our web site (http://genome.rtc.riken.go.jp) for
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  61
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                                                                                 ST.
                                                    modified pBluescript KS(+) after bulk excision from Lambda
                                                                                                                                                                                                                                                                                                                                                                                             prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory
                                                                                                                                                                                                                                                                           contributed to prepare mouse tissues. 1st strand cDNA was
                                                                                                                                                                                                                                                                                                                                                                         RIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Site_1: SalI; Site_2: BamHI; cDNA library was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="thymus"
/dev_stage="0 day neonate"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="A430034D17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
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  41 c
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                                                                                                                                                                                                                                                                                                                                                                C Sciences Center and Genome Science Laboratory in Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         full-length
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38 g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA cloning. Methods Enzymol. 303,
  104 t
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A., Yoshino
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В

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RESULT 7
BB229355/c
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                                                    KEYWORDS
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                   ORGANISM
                                                                                         BB229355 RIKEN full-length enriched, 3 days neonate thymus Mus musculus cDNA clone A630020P19 3', mRNA sequence.
Mus musculus
Eukaryota; Metazoa;
                                                                 BB229355.1 GI:8900000
                                                                                                                          EST 03-JUL-2000
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REFERENCE AUTHORS Hirozane, T., Hori, F., Ishii, Y., Ishikawa, T., Ishikawa, T., Itoh, M., Izawa, M., Kadota, K., Kagawa, I., Kai, C., Kawai, J., Kikuchi, N., Kiyosawa, H., Kojima, Y., Komoo, S., Koya, S., Kurihara, C., Kusakabe, M., Matsuyama, T., Miki, R., Mizuno, Y., Nakamura, M., Oda, H., Okazaki, Y., Ono, T., Owa, C., Saito, H., Sakai, C., Sato, K., Shibata, K., Shibata, Y., Shigemoto, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Sugahara, Y., Suzuki, H., Suzuki, H., Tagawa, A., Takahashi, F., Tominaga, N., Toyama, Shiraki, T., Suzuki, H., Suzuki, H., Tagawa, A., Takahashi, F., Tominaga, N., Toyama, Shiraki, T., Suzuki, H., ,T. Tsunoda,Y., Watahlki,A., Watanabe,S., Yamamura,T., Yamanaka,I., Yano,R., Yasunishi,A., Yokota,T., Yoshida,K., Yoshiki,A., Yoshino,M., Muramatsu,M. and Hayashizaki,Y.
RIKEN Mouse ESTs (Konno,H., et al.) Konno,H., Aizawa,K., Akahira,S., Akiyama,J., Arakawa,T., Ca, P., Endo,T., Fukuda,S., Fukunishi,Y., Hara,A., Hayatsu,N., Mammalia; Eutheria; 1 (bases 1 to 276) Chordata; Rodentia; Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus Carninci

Unpublished (2000) Contact: Yoshihide Hayashizaki

JOURNAL COMMENT

TITLE

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The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, JarTel: 81-45-503-9222

81-45-503-9216 230-0045, Japan

Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/

Carninci,P., Nishiyama,Y., Westöver,A., Itoh,M., Nagaoka,S., Sasaki,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Thermostabilization and thermoactivation of thermolabile enzymes by trehalose and its application for the synthesis of full length cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki

Automated filtration-based high-throughput plasmid preparation system. Genome Res. 9 (5), 463-470 (1999)
Carninci,P. and Hayashizaki,Y. and Hayashizaki,Y.

19-44 (1999) High-efficiency full-length cDNA cloning. Methods Enzymol. 303,

further details. visit our web site (http://genome.rtc.riken.go.jp) for

FEATURES

source

contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5', GAGAGAGAGAGGATCCAAGAGCTCTTTTTTTTTTTTTTVN 3'], cDNA was /note-*Site_1: Sall; Site_2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken /dev_stage="3 days neonate" /lab_host="DH10B" tissue_type="thymus" /clone_lib="RIKEN full-length enriched, /clone="A630020P19" /db_xref="taxon:10090" Location/Qualifiers organism="Mus musculus" w days neonate

prepared by using trehalose thermo-activated reverse

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BASE COUNT
65
                  modified pBluescript KS(+) after bulk excision from Lambda
54 c
42 g
115 t
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Š Best Loc Matches Query Match Local 17; 1 GCTTCGGGAAACTGAAGG 18 Similarity Conservative 91.1%; 94.4%; 0; Score 16.4; DB 10; Pred. No. 1.1e+03; Mismatches Length 276; 0

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ORIGIN

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128 GCTTCGGGAAACTGAGGG

111

RESULT 8 BJ014233 LOCUS DEFINITION VERSION ACCESSION BJ014233 MF01SSA cDNA Oryzias вJ014233.1 GI:17361113 mRNA sequence. **BJ014233** 626 bp latipes cDNA clone MF01SSA197E08

SOURCE ORGANISM KEYWORDS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neotele Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Beloniformes; Adrianichthyldae; Oryzinae; Oryzias. Oryzias latipes Japanese medaka. Vertebrata; Euteleostomi; Neoteleostei;

REFERENCE AUTHORS TITLE COMMENT JOURNAL National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540, Japan Tel: 81-559-81-6856 Unpublished (2001) Contact: Tadasu Shin-i Kohara,Y., Shin-i,T., Kimura,T., Na Medaka EST Project in Takeda's lab Center For Genetic Resource Information (bases 1 to 626) Narita,T., Jindo, T. and Takeda, H.

FEATURES source Email: tshini@genes.nig.ac.jp.
Location/Qualifiers 81-559-81-6855 /organism="Oryzias latipes"

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/dev_stage="segmentation stage 20
163 c 163 g 150 t /strain="Hd-rR" /db_xref="taxon:8090" /clone="MF01SSA197E08" ion stage 20 150 t 25

Query Match Best Local Matches 583 Similarity 17; Conserv GCTTCGGGAAACTGCAGG GCTTCGGGAAACTGAAGG Conservative 91.18; 94.48; 600 0; Score 16.4; DB 13 Pred. No. 1.3e+03;

DB 13;

Length 626;

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ORIGIN BASE COUNT

DEFINITION ACCESSION RESULT 9 BG994343 FOCUS VERSION 637 bp mRNA linear PMO-HT1166-130201-003-f03 HT1166 Homo sapiens cDNA, BG994343 BG994343.1 GI:14398413 mRNA sequence

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REFERENCE
AUTHORS
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                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;
                                                                                                                                                             Oryzias latipes
                                                                                                                                                                                                       EST.
                                                                                                                                                                                                                                                                           BJ011936 MF01SSA cDNA Oryzias
Unpublished (2001)
              Kohara,Y., Shin-i,T., Kimura,T., Nemedaka EST Project in Takeda's lab
                                                                                                                                                                                                                                             BJ011936
                                                                                                                                                                                                                                                          mRNA sequence.
                                                                        Beloniformes; Adrianichthyidae; Oryziinae;
                                                                                                                                                                              Japanese medaka.
                                                                                                                                                                                                                      BJ011936.1 GI:17360330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.bx/Scripts/gethtml2.pl?tl=PMO&t2=PMO-HT1166-130201-003-f03&t3=2001-02-13&t4=1)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory ôf Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 and
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence tags
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+55-11-2707001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
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                                                                      Oryzias.
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  17; Conserv
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DNA is from a doubled
Seq primer: TF
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17; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
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  Conservative
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                                                                    /clone_lib="BO_2_3_KB"
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genomic DNA inserted in 165 c 153 g
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                                                                                                                                                                                                  Location/Qualifiers
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/sex="mixture of female and male"
/tssue_type="whole embryo"
/dev_stage="segmentation stage 20
166 c 166 g 153 t
                                                                                                                                                                       'organism="Brassica oleracea"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:8090"
/clone="MF01SSA169C01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Oryzias latipes"
/strain="Hd-rR"
             91.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91.18;
94.48;
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             Score 16.4;
Pred. No. 1.
                                                                                                                                                                                                                                              haploid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 16.4; DB 13;
Pred. No. 1.3e+03;
0; Mismatches 1;
  Mismatches
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                                                                    into pHOS1 |
212 t
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                                                                                               Site_1:
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153 t
                                                                                                                                                                                                                                                                                                                                                             of Brassica
              .3e+03
                            DB 17;
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                                                                                  BstXI; 2-3 kb
S1 using BstXI
                            Length 691;
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                                                                                                                                                                                                                                                                                                                                                             oleracea
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linkers
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GCTTCGGGAAACTGAAGG

Murinae; Mus

de Jong, P Ak inret

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RESULT 13
AZ099636
LOCUS
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AUTHORS
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AZ703698
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SOURCE
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          KEYWORDS
                                                 ACCESSION
                                                                                          DEFINITION
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JOURNAL
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Best Local
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                                                                                                                                                                                                                                                                                                                     Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
Other_GSSs: RPCI-23-225D9.TV
Contact: Shaying Zhao
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville,
        AZ099636.1 GI:7752692 GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               library availability, please contact Pieter de Jong (pdejong@mail.cho.org). Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC page: http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,B., Levins,M., Mcgann,S., Tsegaye,G., Geer, and Fraser,C.M.
Mouse BAC End Sequences from Library RPCI-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 698)
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RPCI-23-225D9.TJ RPCI-23
DNA sequence.
                                                 AZ09963
                                                                DNA sequence.
                                                                                        RPCI-23-464K4.TJ RPCI-23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: 301 838 0200
Fax: 301 838 0208
                                                                                                           AZ099636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Class: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhao, S., Nierman, W., Feldblyum, T., Malek, J., Shatsman, S., Akinret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
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                                                                                                                                                                                                                  GCTTCGGGAATCTGAAGG 688
                                                                                                                                                                                                                                                      GCTTCGGGAAACTGAAGG 18
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                                                                                                                                                                                                                                                                                                                                                                                                      209
                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           szhao@tigr.org
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                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: Kidney/Brain; Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI; Female C57BL/6J mouse kidney and/or brain genomic DNA was isolated and partially digested with a combination of EcoRI and EcoRI Methylase. Size selected DNA was cloned into the pBACe3.6 vector at the EcoRI sites. The ligation products were transformed into DH10B electrocompetent cells (BRL Life Technologies). "a 131 c 147 g 211 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="RPCI-23-225D9"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="RPCI-23"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'sex="Female"
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                                                                                                                                                                                                                                                                                                                91.18;
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Pred. No. 1.3e+03;
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Mus
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Mus musculus
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                                                                                                             DNA
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genomic clor
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                                                                                     clone
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RPCI-23-464K4,
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AUTHORS
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BI971320/c
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                                                                  REFERENCE
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    TITLE
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Vodkin,L., Keim,P., Shoemaker,R., Retzel,E., Khanna,A., Coryell,V
Erpelding,J., Raph,C., Shoop,E., Pardinas,J., Llu,L. and Lewin,H.
A functional Genomics Program for Soybean (NSF 9872565)
                                                                                                    Glýcine max
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library availability, please contact Pieter de Jong pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/orderingframe.htm) or from Resea ch Genetics (info@resgen.com). BAC end page: http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html Plate: 464 row: K column: 4
                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                    mRNA sequence.
BI971320
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GM830013Al1E09 Gm-r1083 Glycine
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Class: BAC ends
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9712 Medical Center Dr., Rockville,
Tel: 301 838 0200
Fax: 301 838 0208
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Department of Eukaryot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Other_GSSs: RPCI-23-464K4.TV
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Mouse BAC End Sequences from Library RPCI-23
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Mus musculus
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Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: szhao@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                (bases 1 to 662)
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/clone="RPCI-23-464K4"
/clone_lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/strain="C57BL/6J"
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
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2e+03;
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                                                                                                                                                                                                                                                                                             cDNA clone Gm-r1083-4817
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                                                                                                                                                                                                                                                                                                                linear
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Gaps

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Coryell, V.

Phaseoleae;